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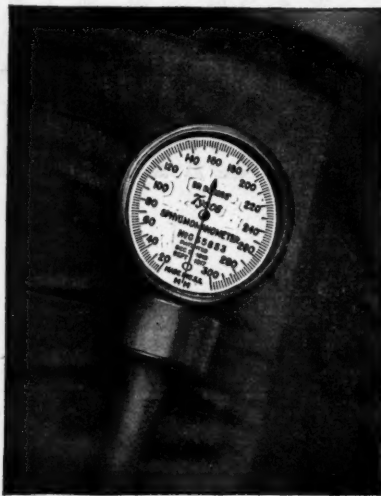
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ORIGINAL ARTICLES

ACUTE CEREBRAL INJURY*

By

LUCIUS C. KINGMAN, M.D.,
76 WATERMAN STREET, PROVIDENCE, R. I.

This subject is of increasing importance due to the increasing number of cases. Unless some radical solution of the traffic problem is soon reached we must expect a still larger number, for the majority of these cases are from motor car accidents. The momentum of an automobile even at low speed is tremendous. Transmit this to an individual, even by a casual bump, and he is usually tossed with a tendency to come down on his head. Or, if thrown from a car, he again tends to come down head first with the force of retained momentum added to the height of the fall.

As to numbers in this community the total must be large. At the Rhode Island Hospital, from 1920 to 1923, there was an average of nine cases a month. For the two years ending October, 1929, there was an average of 13.3, an increase of fifty cases a year, and this was without increase in general admission.

Add to this number the cases entered at other hospitals, the cases killed outright or dying without entry to hospital, cases taken home and there treated, and unrecognized cases, we have a long record of morbidity as well as mortality.

The term "skull fracture" is that commonly used to designate the class of cases under discussion. Cerebral injury or cerebral trauma is the better term. "Skull fracture" focusses the attention on the bony injury which in the majority of cases is of secondary importance. We may have severe skull fracture without brain injury and, conversely, severe brain injury without skull fracture. It is, however, important to establish the fact of fracture as its presence is in favor of brain

injury. Also, from the medico-legal standpoint it may be of great importance in establishing the fact of injury. A crack seen on an X-ray plate is more easily shown to a jury than a change in personality however plain the latter may be to a neurologist.

A case of cerebral injury belongs primarily to the neurologist. The surgeon, the ophthalmologist and the aurist may be necessary. The neurologist is needed in the original diagnosis, in observation during the acute stages of the case, and especially in the necessarily long follow-up of the case.

In the handling of these cases at the Rhode Island Hospital they are entered on the surgical service because of the frequency of other associated surgical conditions and because of the organization of the House Staff.

The injuries of the skull are easily classified into simple and compound. The simple into: a, linear; b, stellate; c, comminuted; d, depressed, (1) complete, (2) inner table.

The compound include an: a, external compound; b, internal compound; this latter to designate opening of fracture into air sinuses, frontal, sphenoidal, ear. Severity of bony injury has little prognostic value as to severity of cerebral injury.

It is important to realize that not only may injuries be multiple but that they shade one into the other so that a sharp line of demarcation is impossible.

We have, first, the anatomical classification and, second, a physiological classification.

Anatomical: a, contusion; b, laceration; c, hemorrhage—in brain tissue or outside brain tissue; d, direct pressure from depressed bone; e, non-penetrating gunshot wound; f, penetrating wound with foreign body.

These lesions shade into each other. Contusion and laceration connote accompanying hemorrhage which may be the major condition. Any of the lesions may range from so slight an affair as to almost escape notice to a severity causing instant death. The lesion may be at the point of impact or by contre coup at the opposite pole of the brain.

Hemorrhage may occur as: a, subdural. (1) Punctate hemorrhage accompanying contusion

*Read before Rhode Island Medical Society, December 5, 1929.

and usually multiple. (2) Localized hematoma again usually with contusion or laceration. (3) Broad extravasation over cortex as is often seen accompanying linear fracture. b, extradural.

Collection of blood between skull and dura is usually from rupture of middle meningeal artery. This lesion is much spoken of in the text-books but as seen in the clinic is a rarity. These lesions are more severe in old than young. In children the dura is not as strongly attached to the skull. The dural vessels are in shallower grooves. Thus in injury of vault with fracture, laceration of dura and brain are not as readily caused, extradural hemorrhage is rare, blood may more readily escape through a fracture line forming the characteristic hematoma of the scalp. This may serve as a spontaneous decompression.

In compound fractures we may have added to the picture, infection. This is especially true in involvement of frontal sinus, next ear, next vertex.

The gunshot wound when non-penetrating may present a rather unique lesion. With a glancing hit without fracture, or only slight fracture of inner table, and with no dural lesion, there may be found blood clot and disintegrated brain tissue under point of impact. This disintegration is apparently due to the high velocity of the bullet and is not softening from clot pressure.

The penetrating wound with foreign body, usually even in peace times a bullet, may be a bone fragment driven in. And I have seen a belt hook in a mill which flew across a room and buried itself in an operative's brain.

In a physiological classification we have those changes in function due to demonstrable anatomical lesions and also those in which we cannot show any such lesion but can show definite changes in function. The latter are the difficult cases to explain. Paralysis from destruction of motor tracts, cortical inhibition from bony pressure, are easily understood. But the pathology of function such as that underlying epilepsy and mental changes has yet to be cleared up. The pathological basis of concussion is not well known. There seems to be primary anemia with secondary edema which latter may be slight to great.

Edema of the brain may occur as a complicating factor in any injury. This factor may be the most important in the patient's condition. For the

presence or absence of increased intracranial pressure may be the difference between life and death. It is not often that blood clot or bony pressure alone increase the intracranial pressure. And it is in terms of intracranial pressure that we must consider the average case.

This increase in intracranial pressure is usually due to reactionary edema, hemorrhage, or both. The pathological or physiological basis of the edema we do not know. But increased pressure once present may be maintained or aggravated mechanically by the swelling interfering with return venous flow and with the paths of absorption of the cerebro-spinal fluid.

Symptoms and Signs

As in any injury a condition of shock may be present which may completely overshadow at first the cerebral condition and which may be fatal. The symptoms, as in any shock case, are rapid, poor pulse, lowered blood pressure, subnormal temperature, probably unconsciousness, gray appearance. After the shock state is over, or lacking it, we get the signs and symptoms due to increased intracranial pressure and those due to the local lesion. Unfortunately the latter are often absent making direct attack on the lesion impossible from lack of localizing signs.

As in so many other conditions positive signs are of value while lack of signs and symptoms is valueless. The whole picture must be seen and the complete development may not take place for some days or longer. The patient may be conscious, stuporous, in coma, delirious, in convulsions, paralyzed. In those conscious there is usually a history of preceding unconsciousness. The more marked these symptoms are the more chance of serious lesion.

The pulse ranges from high to low. The slow pulse of under sixty means intracranial pressure and its presence early points to serious damage usually too extensive for control by operation or other measures. Observation of change of rate is important in estimating progress of case but is not always indicative of amount of damage.

Blood pressure readings give us some estimation of the general condition of the patient especially the state of shock. They may be an important guide as to when to handle the patient. As a means of estimating intracranial pressure they are unreliable.

Vomiting is of no diagnostic value.

Rate and character of breathing gives a clue to involvement or not of the respiratory centres.

The temperature is also variable. Initial temperature is usually low due to the shock. Then a rise is to be expected. Brain laceration gives a high temperature. The more serious the lesion the higher the temperature is apt to be. Higher axillary temperature on the side opposite the lesion is reported in a series of cases.

On inspection of patient bleeding from nose or ear may be noted, but a blow on nose or ear may have caused it. If cerebro-spinal or brain tissue is present the evidence is plain. Bleeding from the ear is the more important as local injury is not so common.

The pupils, if normal in size and reaction, mean nothing. Fixed pupil is a bad sign. Variation during time of observation may be of value in determining progress of case. Unilateral dilatation points to cerebral damage on the same side.

Fundus observation when in skilled hands, especially when repeated, may determine increased or increasing pressure. There is usually no change under six hours. The examination is often difficult on account of irrational patient.

Scalp wounds or hematomata when present often point to location of point impact and occasionally to presence of contre coup injury.

While the general neurological examination, when done early, may be unsatisfactory on account of shock or concussion it should be made as soon as practical to form basis for later comparative examination.

Cranial nerve involvement: The seventh and eighth most commonly injured, then third, sixth and first. The usual normal and pathological reflexes of upper and lower limb and abdomen must be noted. Localized muscular abnormalities, flaccid, spastic, irritative, can not only prove brain injury but give the clue to localization.

Lumbar puncture is the most important means of determining increased intracranial pressure. The theoretical danger of medullary block against the foramen magnum is more than compensated for by its advantages both for diagnosis and treatment. The fluid pressure must be measured by the manometer, not by guess. The constant presence of blood is of significance—its absence means nothing.

X-ray examination of the head is essential but the danger of the x-ray examination is a real one. It may focus attention on the bone injury instead of the brain injury. It may lead to incorrect diagnosis. Positive evidence only is of value. A case is brought to the accident room, dazed, with a scalp wound. The fumes of alcohol (which may have been furnished by a friend after the accident) cloud the reasoning of the observer as well as the patient. An X-ray is taken. No fracture is found. The patient goes home or to the police station and later is found unconscious from cerebral injury.

All the various signs or symptoms, as have been pointed out, are so inconstant and variable, even including spinal fluid determination, eye-ground examination and x-ray findings, that there are serious pitfalls in differential diagnosis. Other injuries often are present and may overshadow the cerebral trauma because more apparent. A person who has taken drink—and such can be seen even today—tends to fall, and it is not true that such a one never hurts himself. Drunkenness does not rule out brain injury. A man has apoplexy while on his feet and falls as a result thereof, receiving a scalp wound. An epileptic has his fit on the street and bruises his head in the process. If no acquaintance accompanies him to the hospital and he enters as cerebral trauma that is fortunate, for it may be that added to his primary affliction. Such cases as these tax all our resources of examination and repeated observation.

In treatment of head injury we must primarily think in terms of intracranial pressure for this is the immediate fatal factor. Between a condition of no increase in pressure requiring no treatment and such an increase that treatment is of no avail we have a gradually sliding scale. The proper treatment to apply, gauged to this scale, is perhaps a matter of experience and judgment and not of fixed rules, though there are some helps, especially the response to treatment.

As to the treatment of skull fracture itself when present:

Simple linear fracture requires no treatment.

Depressed fracture of one and especially of both tables usually requires elevation with replacement of fragments. This is not an emergency measure. If the case with depression can-

not stand a wait of some hours to overcome primary shock there is more the matter with the brain than simple bony pressure and elevation of fragments will not save him.

Compound fractures require debridement of scalp and bone. To avoid infection this must be done within the first twelve hours, but it does not have to be done immediately. Mastoid involvement requires careful watching and operation if any suspicious signs appear. This applies also to frontal sinus involvement.

The increased intracranial pressure can be combatted by: (1) Lumbar puncture. (2) Intravenous hypertonic solution. (3) Magnesium sulph. by mouth or rectum. (4) Decompression operation.

(1) Lumbar puncture by drawing off excess of cerebro-spinal fluid will lessen the pressure and thus directly be of benefit, and secondarily also by helping more normal absorption following relief of pressure. A single tap may be all required. Some cases require repeated tapping.

(2) Where lumbar puncture cannot be successfully done or where insufficient, hypertonic solution intravenously will be of use, glucose is preferable. It causes an actual shrinking of the swollen brain.

(3) Magnesium sulphate will lessen the pressure, not as abruptly but over long periods. It is given in concentrated dosage by mouth or rectum. If concentrated it has not the usual marked purgative action. (This is another good example of the value of the experience and observation of the old masters. Salts were good for brain cases long before spinal puncture was invented.)

(4) Decompression for increased pressure occasionally is of use where other methods fail either completely or in part. These cases will be a rather small percentage. The general tendency is not to operate so quickly or so often as formerly. Results were no better and decompression is not without its morbidity.

Localized lesions with pressure or irritative signs, unless slight or rapidly improving, should be explored. This will give a greater chance of complete cure and lessen the chance of future complications. Unless the signs are rapidly progressing it is not an emergency.

Rest in bed with freedom from fatigue of visitors or excitement for a minimum of two to three weeks is a most necessary procedure. Exertion both physical and mental must be kept at a level

low enough to avoid fatigue for six months, and the case should be under observation for at least two years. In children treatment can be more conservative and a faster recovery looked for.

To summarize treatment: A routine should be followed flexible enough to meet the requirements of the given case but sufficiently routinized so that there will be no omission of important details.

The following is suggested:

(1) The patient is put to bed, temporary sterile dressings applied to open wounds. Temperature, pulse, respiration and blood pressure noted. Hourly chart.

(2) If shock is present as shown by low blood pressure and low temperature and general appearance, this is combatted by lowering the head of bed, heaters, morphia, subcutaneous saline with adrenalin, magnesium sulphate oz.i in water, oz.vi by rectum,

(3) When no shock, or shock recovered from: X-ray examination. Neurological examination. Surgical examination for other injuries. Lumbar puncture. Repair of surgical condition.

(4) Use of repeated lumbar puncture, intravenous glucose, and magnesium sulphate by mouth or rectum as indicated.

(a) Puncture may be done every eight to twelve hours with removal of up to 5cc. of fluid.

(b) When pulse pressure equals pulse rate give 25cc. of 50% glucose intravenously.

(c) For the first 48^h oz. $\frac{1}{2}$ of magnesium sulphate may be given every two hours.

(5) Consideration of decompression for pressure. Consideration of operation for focal lesion.

(6) Bromide by mouth or rectum to control irritative symptoms.

(7) Keep in bed minimum of two weeks.

(8) Report at stated intervals for appropriate neurological examination.

The prognosis varies with the amount of brain damage and with the location of this damage. It usually is not possible to evaluate this except by waiting. Actual destruction of brain tissue will cause some impairment of brain function. And without demonstrable destruction of tissue there will be a percentage of cases with functional disorders—epilepsy, changed personality, emotional changes, loss of memory, vertigo, headache. These late results and their treatment are beyond the scope of this paper.

PROVIDENCE TUBERCULOSIS LEAGUE

Annual Meeting, January 29th, 1930

The annual meeting of the League was held on the above date at the Hospital Trust Building, at 4:30 P. M. The meeting was called to order by the President, Dr. Jay Perkins. There were 27 present, 7 being members of the Board.

The minutes of the last meeting were read and approved.

The report of the Executive Secretary was read, showing a 17 per cent, increase in the amount of work done over the previous year, 1928. It was voted to accept this report and place it on file.

The report of the Director of Lakeside was read, giving a short history of the outing and preventorium work in Providence since 1906. It was voted that this report be accepted and placed on file.

The report of the Treasurer was read, showing that the expenses had been kept within the budgets, for both the League and Lakeside, and small balances were on hand at the close of the year. The treasurer stated that the accounts have been audited and found to be correct. It was voted that his report be accepted and placed on file.

Mr. Kinghorn, Chairman of the Nominating Committee, presented the following names for the Board of Directors for 1930: George H. Capron, Mrs. George H. Crooker, Mrs. Henry C. Hart, Edward B. Hough, James A. Kinghorn, Rev. A. M. Lord, D.D., Alfred L. Lustig, Mrs. Robert E. Newton, Dr. Jay Perkins, Dr. D. L. Richardson, Hon. Frederick Rueckert, Mrs. Albert M. Steinert, Dr. Ellen A. Stone, William A. Viall, Dr. Pearl Williams.

There being no other nominations, the Secretary was instructed to cast one ballot and the above named persons were declared elected.

The President stated that a recreation pavilion had been erected at Lakeside during the fall, the labor and materials having been contributed by Mr. E. B. Hough, a member of the committee, and Mr. J. G. McPherson, the builder. On motion of Mr. Kinghorn it was voted that a letter be sent thanking each of the above named persons for their gifts and their interest in Lakeside.

Adjourned.

HARRIET E. P. CROOKER, *Secretary*.

REPORT OF DR. JOHN I. PINCKNEY,

EXECUTIVE SECRETARY, 1929

The amount of work accomplished during the past year exceeds that of the highest previous year, 1928, by 17 per cent. Records for the past four years show a steady increase in the regular clinic service, the number of clinic sessions being 2.6 times what it was in 1925. In 1929 both the total visits and the number of individuals examined are four times what they were in 1926. New patients admitted to the clinics also have increased each year until the figure for 1929 is 2.7 times that of 1926. This steady growth indicates a healthy condition in the conduct of the organization and is very largely due to the harmony which prevails in the League's affairs, and to our splendid relations with affiliated organizations.

During the year a number of changes have occurred in the staff. Dr. J. Murray Beardsley, medical assistant, resigned in September to accept an internship at the Rhode Island Hospital, Dr. U. Zambarano taking his place. Miss Frances Clarke, who had been with the organization in the capacity of social worker and nurse for over two years, and Miss Louise Dingwell, nutrition worker for four years, resigned in September, the former to take up post graduate work at Columbia, and the latter to accept a scholarship granted by the National Tuberculosis Association at the Massachusetts Institute of Technology. These vacancies have not been filled, as Dr. Wallace, who conducted the recent health survey in Providence, recommended that a well trained statistician be employed by the League to study the mass of material gathered during the past five years. As no provision had been made in the budget for this statistical worker it was decided to substitute, for the present at least, such a worker in place of the social-worker-nurse and the nutrition worker, particularly as the Providence District Nursing Association was willing to provide additional nursing service, and the City Health Department, a nurse to aid in the work carried on by this League in the Parochial Schools. The State Tuberculosis Association, as a contribution to the work in Providence, agreed to pay for one-half the salary of a statistical worker for six months. Miss Agnes Leisy was, therefore, employed in September, and is now engaged in making the study recom-

mended. Miss Chadsey and Miss Springthorpe have been added to the clerical staff.

Medical

Exclusive of the children examined in the schools, at Lakeside, and in the patients' homes during 1929, there were 3349 individuals who paid 6136 visits to the regular clinics for which the Providence Tuberculosis League provides a medical examiner, an average of 1.8 visits per individual. Of the 3349 individuals, 1774, or 53 per cent, were new patients. New patients were referred to the clinics as follows: by physicians, 17 per cent; by tuberculosis nurses, 45 per cent; by other public health nurses, 17 per cent; by other agencies, 10 per cent; came in of their own accord, 11 per cent.

The clinics conducted at the League's office handled 74 per cent of the total clinic work in 1929; the clinics held at the City Hospital and at Nickerson House, 8 per cent each; the clinics at Federal Hill House, 7 per cent, and the clinics at the Lying-in Hospital, 3 per cent. Of the individuals examined 262, or 6.7 per cent, lived outside of Providence.

The special examinations of school children begun in 1925 were continued in 1929. Each year sees a falling off in the number of the original group we are able to reach. This may be explained by the fact that, during the child's years in the elementary schools the parents undoubtedly made the decisions for the examinations, whereas the older children, many of whom are now in high school or working, probably influence their parents. We shall make a determined effort to reach all of the original group this year but, without the co-operation of the public school health authorities, our problem is a difficult one. The loss of a large number of the original group will materially affect the value of the study. During 1929, 545 of these children secured 897 examinations. These, with those examined at Lakeside and in the patients' homes, bring the total number of individuals seen during 1929 to 3937, and the total of clinic visits to 7707. Of this number, 62 per cent were children, 38 per cent adults. Of the adults, 31 per cent were male, 69 per cent female. 1620 of these individuals received X-ray examinations. 1632 were given the tuberculin skin test. 639 home visits were made by the League's workers.

A distribution by Wards of the Providence residents who attended the clinics compared with the Ward distribution of tuberculosis deaths, indicates a great deficiency in clinic attendance in so far as Ward one is concerned. This Ward, which contains 7.5 per cent of the population of Providence, was the home of 10.8 per cent of all the Providence residents who died of tuberculosis in the past five years. Including the work of the Rhode Island Hospital tuberculosis clinic, which is conducted in Ward one, only 4.2 per cent of all the clinic patients in 1929 came from this Ward. Wards four and seven should also furnish more clinic patients as indicated by the ratio of clinic visits to tuberculosis deaths.

Full death returns for 1929 are not available as yet but it is certain that the tuberculosis death rate has decreased to a gratifying degree. The tentative tuberculosis death rate for 1929, corrected for residents, is 69.5 per 100,000 population. The rate for 1928 was 74.7 per cent. The decrease in tuberculosis deaths was among residents dying in Providence, the deaths of residents occurring outside of Providence being practically the same as for 1928. The tuberculosis death rate for the United States registered area was 79 in 1928, the last year for which figures are available.

In the recent health survey of Providence according to the standards of the Committee on Administrative Practice of the American Public Health Association, Providence, for its tuberculosis work in 1928, scored 89 out of a possible 100 points.

Our shortcomings were:

- 1st. The number of reported cases of tuberculosis to annual deaths from that disease. In 1929 there were 274 new cases of tuberculosis among Providence residents reported to the State Department of Health, compared with 222 cases reported in 1928. The 274 cases reported represent 1.4 cases reported per annual death. The standard calls for 2, or 384 cases for Providence in 1929. Responsibility for tuberculosis reporting rests with the State Department of Health. Laxity of physicians in reporting cases and failure of the State Department of Health to enforce the law in this respect constitute our greatest handicap in the control and prevention of tuberculosis.

- 2nd. The number of clinic visits per individual fell short of the standard of three visits, by 1.1

visits per individual in 1928. There are many reasons for this but undoubtedly our follow-up system is at fault. This, during the coming year, we shall try to improve.

3rd. Number of incipient cases admitted to the Sanatorium. The standard set of 25 per cent is in excess of admissions to our best private sanatoria and, while most desirable is, at present at least, unobtainable in Providence.

4th. Number of nursing visits to ex-sanatorium patients. Through a misunderstanding we failed to score an adequate number of visits to this group. This has been corrected in 1929. In all other respects the tuberculosis work in Providence scored well above the standard set.

Lakeside

The year at Lakeside, we feel sure, has been our most successful from the standpoint of prevention. While the number of children cared for and the number of days care given is somewhat below 1928, the length of stay has been prolonged and this, in turn, has been productive of a more lasting and permanent good as evidenced by the condition of the children returning for examination. Greater care in the selection of children for Lakeside will be our aim for the coming year. The details of the work done are set forth in the report of Miss Murray, the director.

Financial

For the past three years this organization has been financed by the Providence Community Fund. During this time the volume of our work has increased 67 per cent, our budget by 29.7 per cent, (from \$22,039 to \$28,584). For this year's work we are granted an increase over the 1929 budget of 4.8 per cent.

During these entire three years our relations have been most cordial and helpful and we feel deeply grateful to the Budget Committee and to the Executive Secretary, Mr. Henry F. Burt, for the consideration accorded this organization. The details of receipts and expenditures will be found in the treasurer's report. The accounts have been audited and are subject to your inspection.

The usual annual meeting of the League and the meetings of the Board of Directors and the Executive Committee have been held during the year.

On behalf of the League I wish to thank all who have served on our Committees, the public press for its allotment of space, the several organizations both official and non-official, particularly the tuberculosis division of the Providence District Nursing Association, whose continued co-operation has contributed so largely to whatever success we may have achieved.

I personally wish to thank the President and the Executive Committee for their continued constructive aid and support, and the executive staff for its splendid co-operation.

JOHN I. PINCKNEY, M.D.,
Executive Secretary.

REPORT OF MISS MARY MURRAY, R.N., DIRECTOR OF LAKESIDE, 1929

In making a report on Lakeside this year I would like to go back a few years and give a brief outline of our outing and preventorium work in Providence.

Dr. Ellen A. Stone and Dr. Mary E. Packard began the work in 1906 when they ran a camp on the grounds of Dr. Stone's home. In 1907 the Providence District Nursing Association conducted a summer camp for delicate children on the Willis E. White farm, Uxbridge, Mass. The next year the Society for Organizing Charity assumed the responsibility for this camp at North Uxbridge. In 1909 there was no such camp. In 1910 Pine-wood, a farm in Bellingham, Mass., belonging to Grace Church, Providence, was loaned to the Society for Organizing Charity for outing work. The following year a farm in Wickford was used for this purpose.

In 1910, the Thimble Club of Providence expressed a desire to finance a preventorium if the League would undertake its management. The old Smith farm at Nayatt, now included in the Rhode Island Country Club, was rented and used as a preventorium during the summer. The next year, this location being no longer available, we moved to the Oakland Beach Hotel.

Moving from place to place was both discouraging and expensive and in 1912, the property now known as Lakeside, was purchased by the generous people of Providence and deeded to the

Society for Organizing Charity. The same year the League, then a committee of the Society for Organizing Charity, erected at Lakeside a two-story building for preventorium purposes. Since then, four other buildings have been constructed and, in 1916, fourteen acres of land adjacent to the Lakeside property was donated by Messrs. Henry D. Sharpe and Samuel H. Tingley. The surrounding portions of land are being rapidly settled and, were it not for this gift, Lakeside would now have little privacy. The present property of thirty acres lies between a road on the north and Warwick Lake on the south, therefore the value of this contribution to Lakeside can be readily seen.

For many years the activities of Lakeside were carried on jointly by the Society for Organizing Charity and the League, under the direction of a committee known as the Lakeside Committee. Later, by an agreement between these two organizations, it was decided that the Society for Organizing Charity take over the relief work of the tuberculous families and the League, being a health agency, would be responsible for the activities at Lakeside.

In 1912 the city playgrounds were not what they are today and much vacation work, as well as convalescent and preventorium care, was demanded of Lakeside. As time went on other summer camps were established and more and better city playgrounds were conducted. By degrees, therefore, Lakeside in recent years has been functioning more and more as a convalescent home and preventorium, rather than a vacation camp. This year, 1929, only women and children in need of convalescent or preventorium care were accepted, consequently a fewer number were admitted but they were kept a longer time. It was hard to convince parents whose children have enjoyed Lakeside in past years that we were rendering a greater service to the community by thus caring for those in definitely poor health.

In 1928, 649 women and children were admitted, which was 200 less than in 1927. In 1929, 296 were received. The average length of stay per person in 1928 was 31 days; this year, the average stay was 64 days. In previous years the women and children admitted to Lakeside were divided into three classes, namely, vacation, convalescent and preventorium groups. This year we have but two divisions, the preventorium and the convales-

cents. The former includes the contacts and those pre-disposed to tuberculosis. We include in the latter group children suffering from heart trouble, rickets, asthma and undernourishment, as well as those sent from hospitals and dispensaries for convalescence and observation.

The 296 women and children admitted were given a total of 19,035 days' care. The total expense was \$22,374.63. The preventorium group numbered 201; the convalescent group, 95. The greatest daily attendance was 138, the smallest 23, and the average 52. 31 are still at Lakeside. The average stay of the discharged preventorium children was 10 weeks, the average stay of the convalescents was 8 weeks. The average gain in weight was 5 pounds; the greatest gain was 20 pounds, made by a 13 year-old girl, who was 25% below standard weight on admission. 55 children of school age were between 15% and 28% underweight on admission. 73% of the preventorium group reacted positively to the tuberculin skin test, while only 25% were reactors in the second classification.

The boys numbered 145; of this number 30 were under 6 years of age, 74 were 6 through 10 years of age, 39 were 10 through 15 years of age, 2 were over 15 years of age.

The girls numbered 147; of this number 14 were under 6 years of age, 79 were 6 through 10 years of age, 48 were 10 through 15 years of age, 6 were over 15 years of age. There were 4 women.

The majority of the preventorium children were selected by Dr. Pinckney, either from his clinics or from the open air schools. Other boys and girls were brought to our attention through the school and visiting nurses, the Family Welfare Society, the Rhode Island Society for the Prevention of Cruelty to Children, the Society for Mental Hygiene, the Children's Friend Society and the Children's Bureau. The children wear trunks only during the summer months, thus benefitting by the sun's rays. The Pan Ray Arc Lamp was used during the winter months. The laboratory work was done by the City and State Boards of Health. The urine of each child was examined and Wasserman done where indicated. Many children were X-rayed at the office of the League. The hospitals have co-operated in many ways.

The Lion's Club paid the salaries of two play directors, furnished movies during the summer and gave us a grand Christmas party at the Narragansett Hotel. The Exchange Club included the Lakeside children in the "Sunshine Special" treat at Rocky Point.

Dr. Pinckney, of the Providence Tuberculosis League, besides acting as admitting physician, visited Lakeside during the summer months when our enrollment is always large. Dr. William P. Buffum, Jr., made weekly visits throughout the year. Dr. Walter C. Robertson, the dentist, also made weekly visits. The children attending the open air school are deeply indebted to Mrs. Mary E. Knox, who has had charge of the school since its beginning, in 1914.

Owing to the dry season the farm did not yield its usual amount of vegetables yet, due to the skillful handling by Mr. Smith, our farmer, a larger crop was harvested than could reasonably be anticipated. The orchard, planted in 1928, is flourishing. The road, groves and grounds have been well cared for.

An improvement has been made in the property practically every year, but much remains to be done. Trees and shrubs along the main road and skirting the road to the north of the property would add greatly to the appearance of the grounds and give added shade. This was attempted last spring when a number of evergreens were set out but, owing to the drought during the summer, the majority of these trees died.

Last fall a pavilion was erected near the shore of the Lake. This is a gift from Mr. E. B. Hough, a member of the committee, and the builder, Mr. J. G. McPherson.

As pointed out last year, a new preventorium building should be erected if we are to continue improving the work and holding our own with similar institutions. Early in 1929, the Executive Committee of the League voted to make application to the Community Fund for a Capital Drive to finance a new preventorium building. Later, Mr. Burt notified us that our request had been placed on file and would receive further consideration from their Executive Committee.

Last autumn the furnace was condemned by the man who installed it nearly thirty years ago. We were advised to replace it by a new one rather than to repair the old one. The Property Com-

mittee took this matter under consideration. They thought the service house, built in 1919, for summer work, should be sheathed inside and the cellar enlarged so that a furnace of sufficient size to heat this house and the present preventorium could be installed in the new cellar. This would lessen the fire hazard and do away with the basement kitchen and basement dining room now used in the main building, as well as relieving the workers of the inconvenience of changing the kitchen and dining room from one house to the other twice a year.

The service house is a substantial building, but is idle six months of the year. With these changes it could and would be used all the year-round and allow for expansion. The two dormitories and the four single rooms on the second floor would then be available for winter purposes and, also, a part of the large dining room could be used as a recreation and school room in winter, when we have a small number of children. However, nothing was done and the furnace, although leaking, has kept us comfortable so far this winter. It is obvious that something must be done before another winter sets in.

This is the twentieth report of the preventorium work. The number of children admitted in 1929 was five times as great as in 1910. The number of days' care given was ten times greater than in 1910. The average stay in 1910 was four-and-one-half weeks; the average stay this year was nine weeks. In 1910, 76% of the children were classified as exposed to tuberculosis. This year 70% were contacts or pre-disposed to tuberculosis. The type of child received has differed little through all these years yet, previous to the opening of the Children's Pavilion at Wallum Lake in 1915, we were caring for a number of sanatorium patients each year and discharged twenty children from Lakeside to that institution during its first year of operation.

The Thimble Club financed the summer work of the preventorium until 1915, and the proceeds from the sale of Christmas Seals was used to maintain the work for the remainder of the year. After the Thimble Club discontinued financial aid the money from the sale of Seals was insufficient to wholly carry on the work, and it was necessary to ask for a larger sum in the annual Lakeside appeal to cover all of its summer activities. This

arrangement continued until the Community Fund began to function and since then, the raising of money has cost us little and we have done more and better work.

Dr. Jay Perkins has been interested in the preventorium from its beginning. Dr. Murray S. Danforth was visiting physician until 1915. The success of the work during these years was due to his enthusiasm and untiring efforts. Dr. Robert C. Robertson and Dr. Herbert E. Harris volunteered their services in addition to those of Dr. Danforth during the winter of 1913, when we cared for a number of children from Crawford Allen Hospital, until that institution reopened in the spring. Dr. Henry E. Utter and Dr. Prescott T. Hill followed Dr. Danforth and Dr. Hill gave freely of his time and experience until May, 1922, when Dr. William P. Buffum, Jr., was appointed.

A preventorium cannot function properly or well without skilled medical oversight. Nurses are as necessary as physicians. The first nurse in charge, Miss Mary E. Cameron, held the position for three summers. She was followed by Miss Ethel Pattinson, who remained six years. Then Miss Millie E. Weir was with us a year and a half, when she went to China as medical missionary. July 1st, 1921, Mrs. Matilda Burnhill, a nurse of broad experience and ability, came to the preventorium. She remained until last June, when she returned to England. Too much cannot be said of the faithfulness and efficiency of these nurses in the up-building of the preventorium. At present Miss Eleanor Bloomfield, R.N., of Newport is nurse-in-charge.

MARY MURRAY, R.N.,
Director of Lakeside.

LADY NICOTINE AND THE LADIES

A contemporary publication, in highly intemperate language, violently attacks the "lying, murderous campaign of the American tobacco trust" on the ground that it is recommending cigarettes to women.¹ "These conscienceless baby killers," says this publication, "should be given a lesson now that will last for the next generation." Since the publication which voices these sentiments disclaims any fanaticism on the subject of tobacco, it draws obviously a sharp distinction

between the sexes in the matter of cigaret smoking. Unfortunately, the scientific evidence on which the convictions are based is chosen with an eye for its usefulness rather than for its authoritative character. "An anticigaret conference is responsible for the statement that there were recently forty babies in one ward of the New York maternity hospital suffering from tobacco heart caused by the cigaret smoking of their mothers. We have no information of our own as to this, but it seems reasonable." Three months previously the following statement² appeared in the same publication: "Sixty per cent of all babies born of cigaret-smoking mothers die before they reach the age of two, due primarily to nicotine poisoning." This statement is attributed to a Dr. Charles D. Barber, although an exactly similar statement was actually made by one Chauncey L. Barber before a convention of the American Association for Medico-Physical Research. This organization, it will be remembered, is an offshoot of the Abrams cult and includes in its membership many prophets of one idea systems of healing. Probably attempts were not made to determine the scientific status of this association, nor has it struck out contemporary that the "startling statement" which it has quoted is unsupported in its context by any kind of evidence whatever. Is there, in fact, any evidence that the use of tobacco is any more injurious to women, pregnant or not pregnant, than it is to men? Two years ago Professor Schrupf-Pierron reviewed the medical literature for the Committee to Study the Tobacco Problem. The summary of his research³ is accompanied by seventy pages of bibliography. There is no mention of tobacco heart in new-born children. After a review of the published evidence, this conclusion is set forth: "Smoking . . . by women has no apparent influence over the functions of the genital system." The morality of smoking by women is not a medical concern any more than the question as to whether or not they should go bareheaded into church. As to the physical harm done to them or to their offspring, if it is any greater than that done by the same habit to their husbands and brothers, it is high time that some scientific evidence be brought forward to show in what this particular harm consists.—*Journal A. M. A.*, July 13, 1929.

1. The Cigaret Outrage, Voice of the Board of Temperance, Prohibition and Public Morals of the Methodist Episcopal Church 17:1 (April) 1929.

2. Voice of the Board of Temperance, Prohibition and Public Morals of the Methodist Episcopal Church 17:3 (Feb.) 1929.

3. Tobacco and Physical Efficiency: A Digest of Clinical Data by Pierre Schrupf-Pierron, M.D., New York, Paul B. Hoeber, Inc., 1927.

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Meets the first Thursday in September, December, March and June

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JULIAN A. CHASE	<i>1st Vice-President</i>	Pawtucket
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DISTRICT SOCIETIES

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G. SENERCHIA	<i>President</i>	Washington
W. H. DYER	<i>Secretary</i>	Warwick

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R. I. Ophthalmological and Otolological Society—2d Thursday—October, December, February, April and Annual at call of President.
Dr. J. E. Raia, President; Dr. F. W. Dimmitt, Secretary-Treasurer.

The R. I. Medico-Legal Society—Last Thursday—January, April, June and October. Henry M. Boss, Jr., President; Dr. Jacob S. Kelley, Secretary-Treasurer.

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HARRY TREADMAN	<i>Secretary</i>	Pawtucket

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WASHINGTON

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WOONSOCKET

Meets the second Thursday in each month excepting
July and August

W. A. BERNARD	<i>President</i>	Woonsocket
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EDITORIALS

IMPORTANT IF TRUE

We have at hand a newspaper clipping which purports to be a condensed résumé of the supervision and inspection of health in the public schools, in which some \$84,000.00 are spent on same during the last year. Together with this staggering announcement comes one none the less astonishing that 96% of public school children are under medical supervision. It does not state what portion of this 96% are under private and what under public

supervision, but it may be inferred that a large portion of these are under State or what may be as well termed Charitable treatment. Let us for a few minutes consider what this means. In the first place, any such high percentage as that may suggest that the race is undergoing a retrograde metamorphosis which exceeds in extent anything ever thought, anticipated or believed. This, it must be borne in mind, is in early youth when the vital powers should be at their highest and fullest vigor and strength. Is it possible that they are born of diseased parents, illy nourished in infancy, and deprived of the usual necessity of food, light and air? Had these figures been 50% or under, we

should be astonished but with 96% we are simply flattened out. Before we can discuss the question of pauperism we must know the proportion of these that are State charges and that percentage under private care, also the nature of the ailments. If as stated in the article, there is such enormous deterioration in the youth of today, it is time that the entire medical profession be aroused.

Comes at this very time an able address by the retiring President of the Providence Medical Society on the subject of Medical Leadership or State Medicine. We have been interested to learn just what State Medicine is, but, whatever it is, the foregoing would appear a part of it, and an interesting and insidious part, too. Our problem is not that of England, where there is a tremendous amount of destitution and a dole. But from a medical standpoint, ours is rapidly becoming a race of paupers, of well dressed and apparently prosperous persons without pride, who gladly receive what is more precious than alms, and who, if compelled to employ a physician, would not pay him and do not intend to pay for the necessities of life if they can avoid it. The free system is evidently encouraging this mendacity, and this system is aided and abetted by those who should be encouraging a sterner manhood and a more honest citizenship than is being developed at the present time.

A CASE OF OBSTRUCTIVE ULCERATIVE COLITIS AND ITS TREATMENT

By W. LOUIS CHAPMAN, M.D.

Consulting Surgeon to St. Joseph's Hospital

PROVIDENCE, R. I.

Miss M. H., age 21, presents herself September 10, 1929, for extreme constipation and obscure abdominal pain. She is 5 feet 4 inches in height and weighs 102 lbs. She has always been spare but has had no medical attention in many years. Her father is alive and well, age 55 years. Her mother died at the age of 35 of pulmonary tuberculosis, at which time great care was taken lest the twin daughters be exposed to infection.

As so often happens in the study of gastrointestinal conditions, there were but few symptoms. The patient was very constipated, and unless aided by cathartics there would be no movement for over a week. There were obscure, vague, diffuse

pains over the abdomen, increased by taking cathartics, but no localization possible on abdominal palpation, no particular pain over the cecum or appendix area. At times the breath was markedly stercoraceous. No tumefaction could be felt either by abdominal palpation or by rectum. There were no suggestive temperature variations. The Hg. was 75%.

Fluoroscopic examination showed the greatest possible descensus of the viscera: the stomach looked like a pudding bag and the colon a shapeless heap therewith. There was a 50% six hour residue in the stomach which showed marked hypomotility but no filling defect except that of distortion from the extreme degree of ptosis. The duodenal cap showed no abnormality. The barium enema showed almost complete obstruction at the hepatic flexure as shown in Fig. 1, a condition suggestive of car-



FIG. 1—SHOWING NEARLY COMPLETE OBSTRUCTION OF THE CECUM IN ITS UPPER THIRD NEAR THE HEPATIC FLEXURE.

cinoma. With this, however, appear numerous punctate deposits of barium suggestive of multiple miliary ulcerations which are shown in Fig. 2, extending over entire cecum and the distal fifth of

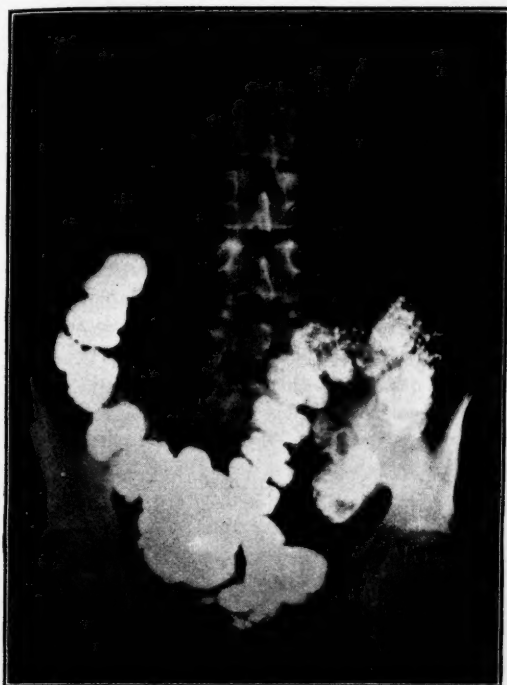


FIG. 2.—SHOWING MANY PUNCTATE BARIUM DEPOSITS IN THE CECUM AND TRANSVERSE COLON.

the transverse colon. These punctate deposits persist after the expulsion of the barium enema and afterwards for three days.

The treatment of this case consisted in X radiations, glycerine enemata, and iron arsenite. X-rays were given in weekly exposures of 12 minutes each, 8-inch spark gap or 120 kilo. volts with 140 volts on the pre-reading volt meter. Tube distance, 24 inches, with 5 mm. aluminum and 7.5 mm. sole leather for filters. Snook Victor transformer and Coolidge broad focus tube, with 4 or 5 M.A. of current. Although the writer usually reserves the hypodermatic administration of iron for these patients whose hemoglobin is under 60%, it was used in the following formula each 3 days: Iron arsenite with ammonium citrate 0.065 G., strychnine nitrate 0.001 in quinine and urea hydrochloride 0.25%. The Hg. is now 85%.

Every third day the patient took a "high enema" or $1\frac{1}{2}$ pints of warm water with two ounces of glycerine, with instructions to inject slowly and retain as long as possible. Occasionally a cleansing enema of soap suds and water was given before the

glycerine enema. The "high enema" was given with a rectal tube about two inches long, just long enough to enter the anal ring. As with most opaque enemata, it reaches all parts of the colon in from five to ten minutes. Glycerine is, of course, triatomic alcohol, and deserves more general use in the treatment of colitis, varicose ulcers and suppurating wounds. In foul suppurating wounds, its action is often quite as marked and spectacular as that of Dakin's and other antiseptic solutions. It seems to be helping my cases of mucous colitis, and I should be glad to hear of the results of its use from other observers.

After three months another barium enema was given, with the result shown in Fig. 3. These figures



FIG. 3—SHOWING STATE OF THE COLON AFTER THREE MONTHS' TREATMENT.

are photographic reductions from the 14 x 17 films and are not altered or retouched in any way nor are they juggled to conform with any particular line of thinking. It will be noted that the obstruction seems to be relieved, that the cecum fills almost completely, and that there are no punctate retentions of the barium enema. The writer has reviewed

a large number of films of the cecum and considerable literature and numerous text-books without finding cases similar to this. Our knowledge of colitis is still in a very unsatisfactory state, and it is hoped that this case will prove to be interesting and instructive and an addition to a not overburdened literature.

The patient is much improved in health, strength and vigor, but has not increased in weight. The constipation is apparently relieved, and owing to the frequent recurrences of colitis which have usually been interpreted as evidences of chronicity and incurability, the X-ray treatments are being continued at two-week intervals.

SOCIETIES

THE RHODE ISLAND MEDICAL SOCIETY

The regular quarterly meeting of the Rhode Island Medical Society was held Thursday, March 13th, 1930, at 4:30 P. M., at the Medical Library Building.

The minutes of the December meeting were read by the Secretary and approved.

The President announced the death of the following members, and referred the matter to the Committee on Necrology for definite action at the annual meeting.

Dr. Sanford S. Burton, Providence, R. I.
Died December 24, 1929.

Dr. Frank B. Smith, Washington, R. I.
Died January 16, 1930.

The following papers were read:

1. "The Pneumatic Institute of Thomas Beddoes 1798," Dr. Albert H. Miller, Providence, R. I.

2. "The Use of Oxygen in the Treatment of Pneumonia," Dr. Alvin L. Barach, Presbyterian Hospital, New York City.

3. "The Serum Treatment of Pneumonia," Dr. Russell L. Cecil, Asst. Prof. of Medicine, Cornell University.

All three of the above papers were illustrated by stereopticon slides, and discussed by Doctors Roberts, Burgess and Wing.

The Treasurer, Dr. Jesse E. Mowry, called the attention of the Fellows to the repairs which

had been done in the reading room, consisting of new rubber tile floor covering, and painting and calcimining walls, etc. He further called attention to the fact that the extra expense incident to these repairs was in part made possible by the receipts from the funds of the RHODE ISLAND MEDICAL JOURNAL of \$500.00 at the end of 1929.

On motion of Dr. Pitts, duly seconded, it was voted that the Rhode Island Medical Society instruct the Secretary to request the American Society for the Control of Cancer to take a cancer survey of Rhode Island, and report to The Rhode Island Medical Society.

After adjournment a collation was served.

DR J. W. LEECH, *Sec'y.*

PROVIDENCE MEDICAL ASSOCIATION

The regular monthly meeting of the Providence Medical Association was called to order by the President, Dr. Clinton S. Westcott, Monday evening, March 3, 1930, at 8:45 o'clock. The records of the last meeting were read and approved. An obituary of Dr. Sanford S. Burton was read by Dr. Harry S. Flynn and the Secretary was instructed to insert it in the records and send copies to the family and RHODE ISLAND MEDICAL JOURNAL.

The first paper of the evening, on "Clinical Observation in Diagnosis and Prognosis of Jaundice," was read by Dr. Samuel Morein. It is important first of all to determine if it is surgical or medical, so that, if necessary, surgery can be undertaken before severe destructive changes have occurred. The best practical classification is:

- A. Obstructive hepatic jaundice.
- B. Toxic and infectious hepatic jaundice.
- C. Hemolytic jaundice.

Blood studies, duodenal drainage, stool examination and the presence or absence of pain and its characteristics when present make-up all of the most helpful points in arriving at a diagnosis and prognosis. The paper was discussed by Drs. Burgess and Marein.

The second paper of the evening, on "The Relation of Achylia-Gastrica to the Causation of Pernicious Anemia," was read by Dr. W. B. Castle of Boston. He stated that much of this work was done with the help of doctors at the

Rhode Island Hospital. This is in a way a deficiency disease where the diet is constant but the patient a variable. The increase of reticulocytes following administration of proper amounts of liver, etc., is in inverse ratio to the level of the red count, its maximum effect occurs in the 5th to 10th days. Achylia is practically always present with pernicious anemia.

Their hypothesis has been that the normal stomach acting on a nitrogenous matter produces something similar to liver extract. Normal persons were fed chopped beef and their stomach contents incubated and administered to anemic patients resulted in the characteristic improvement produced by liver. A large series of carefully conceived experiments seem to establish this theory. The paper was discussed by Drs. Lawson, Fulton and Castle.

The meeting adjourned at 10:30 P. M. Attendance 88. Collation was served.

Respectfully submitted,

PETER PINEO CHASE,

Secretary.

The regular monthly meeting of the Providence Medical Association was called to order by the President, Dr. Clinton S. Westcott, Monday evening, April 7, 1930, at 8:45 P. M. The records of the last meeting were read and approved. The secretary read a letter from the *Survey-Graphic* calling attention to the January issue devoted to the cost of medical care.

Dr. Peter Pineo Chase presented a case of suture of all three extensor tendons of the thumb resutured six weeks later with complete recovery. He then showed two cases of fracture through the surgical neck of the humerus, one treated by open operation and the other by extension in a Thomas splint. Complete recovery occurred in both cases.

The first paper was on a "New Infusion Treatment of Shock," by Dr. Robert R. Baldrige. He reviewed various theories of shock, each with something of truth. One of the chief factors is deoxygenation of body tissues. The heart itself is not essentially impaired. Shock is a state of depression of all the vital functions of the body characterized by a progressive fall of blood pressure and a diminished circulating blood volume.

He referred to numerous treatments of this condition. The use of heart stimulants is illogical. To restore effective circulation the volume of fluid

must be increased and blood transfusion is the ideal method. The use of gum arabic solution is deleterious. Subcutaneously administered fluid is eliminated as fast as it is taken up. Intravenous isotonic saline has been found of value, but in the amounts usually given its effect was fleeting. Drs. Baldrige and MacFee, observing the marked dehydration present, have given saline in unusually large amounts—from 2,000 to 8,000 cc. at an injection. All cases were improved, and some were very remarkably so. With careful supervision, the method seems safe. He reported in detail a number of their cases. The paper was discussed by Drs. Kingman, Porter, Wells and Baldrige.

Drs. Appleton and Pickles showed a three-reel motion picture of the wonderful work of Kanavel on "Infections of the Hand."

The meeting adjourned at 10:30 P. M. Attendance 91. Collation was served.

Respectfully submitted,

PETER PINEO CHASE

Secretary

OBITUARY

Sanford S. Burton was born in Providence, August 4th, 1862. He received his preliminary education in the public schools of his native city and in the University of Vermont. He was graduated with the degree of M.D. from the College of Physicians and Surgeons of Baltimore, Md., in 1883.

For many years he had an extensive general practice in the northern part of this city, and was devoted to his patients, and was noted for being ethical in his dealings with his fellow practitioners.

In 1885, he married Antonette Wakefield Angell and is survived by two daughters and three sons, one of whom is now a student at Harvard Medical School.

He joined the Providence Medical Association in 1885 and was also a Fellow of the Rhode Island Society and The American Medical Association. He was not affiliated with any fraternal organization.

He died December 24th, 1929, at the Jane Brown Hospital.

In the death of Doctor Sanford S. Burton the Association has lost an old and valued member and those who knew him best have lost an exemplary brother and the community an excellent physician.

HARRY S. FLYNN, M.D.,
JACOB S. KELLEY, M. D.,
Committee.

HOSPITALS

MEMORIAL HOSPITAL

Memorial Hospital staff meeting held February 6, 1930. Meeting called to order by President Dr. C. H. Holt at 9:20 P. M. Records of previous meeting read and approved as read. Record of attendance taken; twenty-two members present.

The first paper of the evening was given by Dr. F. B. Sargent, on the subject, "Sinus Thrombosis." He presented five cases.

The second paper, "Sinusitis in Children," was given by Dr. N. A. Bolotow.

The third paper, "A Case of Lateral Sinus Thrombosis," was given by Dr. H. A. Winkler. Discussion: Dr. Holt, Dr. Wing and Dr. Sargent.

Dr. J. F. Kenney presented a case of splenic myelogenous leukemia.

Meeting adjourned at 10:18 P. M.

STANLEY SPRAGUE, M.D., *Secretary.*

Memorial Hospital Staff Meeting held March 13, 1930. Meeting called to order by President, Dr. C. H. Holt at 9:10 P. M.

Dr. J. L. Dowling spoke most interestingly on "Industrial Eye Injuries." His excellent paper was illustrated by stereopticon views.

Dr. J. F. Kenney reported on three autopsies.

Dr. E. S. Wing presented a resolution referring to service of Dr. James L. Wheaton which was passed unanimously. A copy of which is to be inserted in the records and a copy to Dr. Wheaton.

Meeting adjourned at 10:37 P. M.

STANLEY SPRAGUE, M.D., *Secretary.*

Memorial Hospital Staff Meeting held April 3, 1930. Meeting called to order at 9:25 P. M.

Dr. James L. Wheaton unanimously elected to act as chairman of meeting.

Dr. Wheaton responded to resolution of Staff expressing his thanks and appreciation.

The paper of the evening was then presented: "Role of X-ray in G. I. Diagnosis," Dr. Philip Batchelder. He spoke of (1) Varieties of opaque media. (2) Relative merits of fluoroscopy and films. (3) Use of single and double meals. (4) Tendency to overvalue X-ray report. (5) Errors in diagnosis less than 20%. (6) Sources of errors in X-ray diagnosis. Stereopticon views of X-ray cases illustrated his remarks.

Discussion by Drs. H. B. Moor, J. L. Wheaton.

Dr. Wheaton on behalf of Staff thanked Dr. Batchelder for his very interesting paper.

Meeting adjourned at 10:36 P. M.

STANLEY SPRAGUE, M.D., *Secretary.*

ANNOUNCEMENT

With practice limited to diseases of the skin, Dr. Vincent J. Ryan has announced the opening of his office at 2 Euclid Avenue, Providence, R. I.

IN APPRECIATION

March 13, 1930.

The members of the Staff of the Memorial Hospital wish to convey to Dr. James L. Wheaton their appreciation of his long conscientious and efficient service as President of the Staff and to place this expression on record.

STANLEY SPRAGUE, M.D., *Secretary.*

CHARLES H. HOLT, *President,*

BOOK REVIEWS

PHYSIOLOGY FOR NURSES, by William G. Christian, M.D., and Charles C. Haskell, B.A., M.D., published by the C. V. Mosby Co.

As stated in the preface, in order for the nurse to derive the greatest benefit from this book it would be necessary for her to have some knowledge

of Anatomy, Physics and Chemistry. With a preliminary course in these subjects, this book seems well adapted to the nurse's needs.

The chapters on "Food and Digestion," and "The Nervous System" are unusually good.

The illustrations throughout the book are excellent, being very clear, well marked and easily understood. The print is large and the chapters are well paragraphed.

PETTIBONE'S TEXTBOOK OF PHYSIOLOGICAL CHEMISTRY, WITH EXPERIMENTS. Fourth Edition. Revised and Rewritten by J. F. McClendon, Ph.D., Professor of Physiological Chemistry, Medical School, University of Minnesota, Minneapolis. C. V. Mosby Company, St. Louis, Mo., 1929, 368 pp.

This latest edition follows the time-saving and confusion-eliminating policy of brevity which characterized the earlier editions. It will prove of value to those who wish to review rapidly the essentials of physiological chemistry and the related branches of the more exact sciences.

GETTING WELL AND STAYING WELL, by John Potts, M.D., C. V. Mosby Publishing Company, St. Louis.

This book is written primarily for patients and Public Health Nurses who are dealing with tuberculosis. It contains all that any patient need know concerning the disease and its treatment and is written in so simple a style that it is not beyond the comprehension of anyone with average intelligence. There is much food for thought for physicians.

A SYNOPSIS OF THE PRACTICE OF PREVENTIVE MEDICINE. By Dr. Shields Warren, from the Harvard University Press.

Was not, as the author states in his preface, "conceived as a text or reference book, but merely as a depository for such points as seemed of possible value in emphasizing, in connection with the present curriculum of the Harvard Medical School, the importance of preventive medicine for the practitioner. The various chapters represent the composite ideas of many members of the faculty, and stress those prophylactic measures that should help the doctor in protecting the health of his patients."

The book, however, would be of considerable value as either a text or reference book, both to students and practitioners of medicine, and especially to those who teach preventive medicine. The author has studied the problems of preventive medicine in relation to each one of the subjects of instruction at the Harvard Medical School. Starting with anatomy and physiology, he discusses pathology, bacteriology, medicine, surgery, obstetrics and pediatrics, and all of the minor subjects with special reference to the phase of the preventive medicine involved in each subject.

The book is concise, well written, and contains a wealth of information. It is not exhaustive and makes no pretense to be. For the general practitioner, however, it contains many facts of importance briefly and accurately phrased, and for the teacher a wealth of suggestions regarding the instruction of pupils in the practical and theoretical aspects of modern preventive medicine.

DISEASES OF THE BLOOD. By Paul W. Clough, M.D. Published by Harper and Bros., New York and London, 1929.

This small volume is one of the very useful and readable publications included in Harper's Medical Monographs. The author, Dr. Paul W. Clough, has been engaged in teaching and research at Johns Hopkins University for a number of years, and in addition is now Director of the Diagnostic Clinic at the Johns Hopkins Hospital. This book is "concerned with those pathological conditions which are associated with abnormalities in the number or character of the blood corpuscles, and the small group of conditions which are associated with defects in blood coagulation." The book may be divided roughly into three parts. The first part is concerned with a general discussion of normal and pathological physiology of the blood. The second part is concerned with clinical entities such as the anemias, leukemias, industrial poisoning, the hemorrhagic diseases, etc. The third part deals with technical methods in blood examinations and in the study of blood disorders.

The first portion of the book, which deals with normal physiology and normal standards, is a very concise and lucid explanation of fundamental facts and the variations from the normal. It is brief enough to be readable, but, nevertheless, contains a great store of useful information essential in

understanding diseases of the blood. The discussion of the clinical aspects of the blood disorders is especially interesting and valuable. It consists of an excellent outline of the clinical manifestations of various diseases and methods of treatment. The views of leading authorities are briefly given in discussing controversial aspects. The reader is also made acquainted with the most recent discoveries and theories in this branch of medicine, especially the valuable work which has been done on anemias in the past few years. This includes the work of Whipple, Minot and Cohn on liver and liver extracts. The very important and interesting experimental work of Hart, Steenbock, Waddell and Elvehjem on the roll of iron salts, copper, and other inorganic substances in ashed material in the production of hemoglobin, is briefly discussed. A chapter on transfusion is included. The book concludes with a detailed outline of methods of blood examinations, and is supplemented by helpful practical hints gleaned from the author's wide experience. The book is very readable, and represents a valuable discussion on the whole subject of blood disorders. It ought to be included in the libraries of every general practitioner as well as the internist and those with special interests.

THE SCREW CURET

Hugh H. Young, Baltimore (*Journal A. M. A.*, July 13, 1929), has devised a small screw curet which can be introduced into even very fine fistulas, and used it effectively for curettage. The curet consists of a screw, which has a sharp cutting edge turned backward, so that when the instrument has been screwed into the depths of the fistula it acts as a curet to remove granulation tissue in the fistulous tract when forcibly withdrawn. In order to avoid penetration of the fistulous wall and invasion of adjacent tissues and organs, the screw terminates in a small ball. In the hundreds of cases in which Young has used this instrument, he has never yet injured the rectum. Before curetting a fistula, it is important to treat thoroughly the fistulous tract with antiseptics, the object being to prevent sepsis occurring, and immediately after the

curettage the wound should be thoroughly treated antiseptically. Young usually employs 1 or 2 per cent solution of mercurochrome-220 soluble, but other noncauterizing, bland but effective germicides may also be employed. Strong silver nitrate or other caustics that produce necrosis of the tissues are usually to be avoided. In some cases the presence of a very fibrous, thick walled fistulous tract requires excision, and it may be desirable to close the opening into the urethra or bladder with sutures after excision of the fistulous tract has been carried out. There is some danger in cutting into the perineal cavity in the excision of suprapubic fistulas or of injuring the rectum in attacking perineal fistulas. To avoid this Young has for many years employed a probe within the fistula and has made traction by clamps on the fibrous tract, while it is gradually freed from adjacent structures by sharp dissection with the scalpel. In fistulas of the scrotum, a similar technic is employed with the closure of the urethra at the point of juncture. When the fistula is in the pendulous urethra, it may be desirable to apply the principles used in hypospadias operations and to cover the wound with flaps after closure of the urethral lumen in two or three layers. It is rarely necessary to excise renal fistulas. Thorough curettage with the screw curet is usually sufficient to effect a cure. If the kidney is infected and purulent urine is escaping through the fistula, an inlying ureteral catheter and pelvic lavage may be of great assistance in effecting a closure. In such cases not infrequently there may be a kink or stricture of the ureter, producing obstruction and forming the underlying cause of the persistence of the urinary fistula. Pyelo-ureterograms will usually elicit information sufficient to clear up such a condition. In such cases it may be desirable to expose the kidney, correct the ureteral or pelvic deformity, and thus facilitate the closure of the renal fistula. Ureteral fistulas present similar problems and are treated in much the same way, efforts first being made to induce their closure by thorough curettage, assisted, if advisable, by placing an inlying ureteral catheter. Fistulas in other parts of the body may often be effectively treated with these screw curets of various dimensions.